Serial No. 09/201,530

2

a broadcast encoder for encoding a video frame sequence to form a broadcast bitstream;

a storage encoder for encoding the video frame sequence to form a storage bitstream;

a transmission system for transmitting the broadcast bitstream to subscriber equipment;

a storage device for storing the storage bitstream; and

wherein the storage device stores the storage bitstream at the same time that the transmission system transmits the broadcast bitstream;

wherein said storage bitstream contains a plurality of bitstream types including at least a play bitstream and a fast forward bitstream, and said fast forward bitstream contains an indicator that delimits the end of available data such that a transition from said fast forward bitstream to at least one of said broadcast bitstream and said play bitstream is appropriate.

5. (amended)   The apparatus of claim 1 wherein said storage encoder comprises:

a first encoder for producing said play bitstream that contains information that, when decoded, produces a forward play video frame sequence;

a frame subsampler;

a buffer that stores subsampled frames of the video sequence;

a second encoder for producing said fast forward bitstream that contains information that, when decoded, produces a fast forward video frame sequence;

a third encoder for producing a fast reverse bitstream that contains information that, when decoded, produces a fast reverse video frame sequence; and

a controller that selects subsampled frames from the buffer and couples to selected frames to the second and third encoders.

8. (amended)   The apparatus of claim 5 wherein the controller multiplexes selection of the frames from the buffer to apply a plurality of subsampled frames to said second encoder to form said fast forward bitstream and then apply a plurality of subsampled frames to said third encoder to form said fast reverse bitstream.

9. (amended)   A method for providing demand television comprising the steps of:

encoding, in real-time, a broadcast video frame sequence to form a broadcast bitstream, while at the same time encoding the broadcast video frame sequence to form a storage bitstream;

Serial No. 09/201,530   3

broadcasting the broadcast bitstream to subscriber equipment;

storing the storage bitstream within a storage device;

upon a subscriber selecting to view information previously broadcast by the broadcast bitstream, transmitting to the subscriber the storage bitstream;

wherein said storage bitstream contains a plurality of bitstream types including at least a play bitstream and a fast forward bitstream, and said fast forward bitstream contains an indicator that delimits the end of available data such that a transition from said fast forward bitstream to at least one of said broadcast bitstream and said play bitstream is appropriate.

12. (amended)   The method of claim 9 wherein said storage bitstream encoding step comprises the steps of:

encoding said frames to form said play bitstream;

subsampling said broadcast video frames;

buffering said subsampled frames;

recalling said buffered frames in a forward time sequence order;

encoding said recalled buffered frames to form said fast forward bitstream;

recalling said buffered frames in a reverse time sequence order;

encoding said recalled buffered frames to form a fast reverse bitstream.

13. (amended)   The method of claim 12 wherein said play bitstream when decoded forms a standard play frame sequence.

14. (amended)   The method of claim 12 wherein said fast forward bitstream, when decoded, forms a fast forward frame sequence.

15. (amended)   The method of claim 12 wherein said fast reverse bitstream, when decoded, forms a fast reverse frame sequence.

17. (amended)   The method of claim 16 wherein said storage bitstream types include a fast reverse bitstream.

18. (amended)   The method of claim 17 wherein the method further comprises a step of switching from transmitting a fast forward bitstream to transmitting said broadcast bitstream upon reaching the indicator.

Serial No. 09/201,530

4

19. (amended)   A method for providing demand television comprising the steps of:
encoding, in real-time, a broadcast video frame sequence to form a broadcast bitstream, while at the same time encoding the broadcast video frame sequence to form a storage bitstream;
broadcasting the broadcast bitstream to subscriber equipment;
storing the storage bitstream within a storage device;
upon a subscriber selecting to view information previously broadcast by the broadcast bitstream, transmitting to the subscriber the storage bitstream; and
upon a request from a subscriber, switching from decoding said storage bitstream to decoding said broadcast bitstream.

23. (amended)   A method of providing demand television comprising the steps of:
transmitting a broadcast bitstream to a plurality of subscriber equipment for decoding;
storing said broadcast bitstream as a storage bitstream while said broadcast bitstream is being transmitted;
upon said subscriber equipment requesting said storage bitstream to enable review of information contained in said broadcast bitstream, transmitting said storage bitstream to said subscriber having requested the storage bitstream;
wherein said storage bitstream comprises at least a play bitstream and a fast forward bitstream, and upon said fast forward bitstream being exhausted of data, automatically switching from said storage bitstream to said broadcast bitstream.

24. (amended)   A method of providing demand television comprising the steps of:
transmitting a broadcast bitstream to a plurality of subscriber equipment for decoding;
storing said broadcast bitstream as a storage bitstream while said broadcast bitstream is being transmitted;
upon said subscriber equipment requesting said storage bitstream to enable review of information contained in said broadcast bitstream, transmitting said storage bitstream to said subscriber having requested the storage bitstream; and
upon said subscriber equipment requesting said broadcast bitstream, switching from said storage bitstream to said broadcast bitstream.

25. (newly added)   The method of claim 19, wherein said storage bitstream comprises at least a play bitstream and a fast forward bitstream, and upon said fast forward

Serial No. 09/201,530   5

bitstream being exhausted of data, automatically switching from said storage bitstream to said broadcast bitstream.

26. (newly added)   The method of claim 23 wherein said storage bitstream comprises a fast reverse bitstream.

27. (newly added)   The method of claim 23, wherein upon said subscriber equipment requesting said broadcast bitstream, switching from said storage bitstream to said broadcast bitstream.

Please cancel claims 20, 21 and 22.

Please add new claims 25, 26 and 27.

REMARKS

In the Office Action, the Examiner noted that claims 1-24 are pending in the application, that claims 1-17 and 20-22 stand rejected and claims 18, 19, 23 and 24 are objected to. By this response, claims 1, 5, 8-9, 12-15, 17-19 and 23-24 are amended, claims 20-22 have been canceled, claims 2-4, 6-7, 10-11 and 16 continue unamended, and claims 25-27 are added. These amendments have been made to expedite the prosecution in conformance with the Examiner's indicated allowable subject matter and not in response to any prior art.

In view of the following discussion, the Applicants submit that none of the claims now pending in the application is obvious under the provisions of 35 U.S.C. §103. Thus, the Applicants believe that all of these claims are now in allowable form.

Specification Amendments

The specification has been amended to include the serial number of the cross-referenced application.